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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/009,746	12/05/2001	Friedrich-Karl Bruder	Mo-6840/LeA 33,726	6704

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EXAMINER	
ANGEBRANNDT, MARTIN J	

ART UNIT	PAPER NUMBER
1756	

DATE MAILED: 06/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/009,746	BRUDER ET AL.	
	Examiner	Art Unit	
	Martin J Angebranndt	1756	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *2/23/2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2 and 8-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2 and 8-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. The response provided by the applicant has been read and given careful consideration. Responses to eh arguments offered by the applicant are presented after the first rejection to which they are directed. Rejections of the previous office action, not repeated below are withdrawn based upon the arguments and amendments of the applicant.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 2,8-11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yanagisawa et al. '171.

Yanagisawa et al. '171 teaches in example 1, the application of a silicon phthalocyanine dye having four sulfoamido groups bound to the phenyl rings of the phthalocyanine moiety in a methanol solution to a polycarbonate substrate to a thickness of 0.2 microns, followed by a gold reflective film and a UV cured resins protective layer and its use as an optical recording medium. (5/7-58). The use of various metal centers, such as Cu is disclosed. (3/67-68) The substituents may be between 0 and 4 (3/64-66). Useful reflective layers are disclosed. (4/10-18). Useful solvents for the recording film, including tetrafluoropropanol, methanol, diacetone alcohol, 2-ethoxyethanol (CELLOSOLVE) 2-methoxyethanol, and isopherone are disclosed (4/5-9)

It would have been obvious to one skilled in the art to modify the example of Yanagisawa et al. '171 to use a copper metal center, rather than the Si metal center with a reasonable expectation of achieving comparable results based upon the disclosure of equivalence. Further it

would have been obvious to use mixtures of the solvents disclosed as useful with these compounds to provide a good coating solution.

Based upon the location of the substituents in the formula and their association (x and y combined add to between two and four), the examiner interprets the coverage to require the recited substitutents to be bound to the phthalocyanine moiety and not the metal (copper).

The applicant argues that the dyes of the claims have significantly improved solubility over those of the prior art and has submitted declaration evidence to support this. The argument concerning the ligands on the central metal is rendered moot by the use of metals such as copper which have fewer coordination sites than silicon. The chemistry of the central metal controls the numberof coordination sites, not the formula of Yanagisawa et al. '171. As pointed out by the applicant copper does not have sufficient coordination sites to bond the hydroxyl moieties, but this is inherent to the metal and the substitution of the copper would be for the silicon and hydroxyl moieties. Dr. Joseph-Walter STAWITZ has submitted has declaration alleging evidence of unexpected results. The examiner holds that the showing is not commensurate in scope with the coverage sought. The examiner notes that the claims embrace x = 4 and y=0, which is more analogous to the prior art compound III. Clearly a group such as SO_3H, which is able to undergo dissociation would contribute to the dissolution of the compound in a polar solvent. The point of attachment is somewhat vague in the claim as well, which undercuts theh applicants arguments concerning ligands on the central metal. The examiner notes that the solvents are not specified in the majority of the claims either, and would require more data to be commensurate in scope with the broad coverage sought. The equivalence of the central metals in the examiner's position still stands and the examiner notes that the comparative data between

dyes I and II seem to indicate that the substituents are more important than the central metal, which is different from the argued position of the applicant.

4. Claims 2,8-11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki et al. JP 63-307987, in view of Kovacs et al. EP 0519395.

Miyazaki et al. JP 63-307987 teaches optical recording media embraced by the formula except in examples 1,8,13 and 15, but use different metal centers. These are spin coated from Chloroform solutions onto a polymeric substrate.

Kovacs et al. EP 0519395 teaches various central metals, metal oxides and metal chlorides, including Cu. (3/55-57). The use of various solvents is disclosed. (12/29-36). The use of binders is disclosed. (12/37)

It would have been obvious to one skilled in the art to modify the example of Miyazaki et al. JP 63-307987 to use a copper metal center, rather than the metal center of examples 1,8,13 and 15 with a reasonable expectation of achieving comparable results based upon the disclosure of equivalence by Kovacs et al. EP 0519395 and the direction to use metals in general by Miyazaki et al. JP 63-307987. Further it would have been obvious to use mixtures of the solvents disclosed as useful with these compounds to provide a good coating solution.

In addition to the basis provided above, the examiner notes that example 1 (V=O), 13 (Ti=O) and 15 (Pb) do not have hydroxyl moieties and therefore are not addressed by the data of the applicant. The examiner particularly points to the use of Pb in example 15 which lacks ligands on the central metal. The examiner cites Kovacs et al. to support the equivalence of the central metal and does not suggest the use of the phthalocyanine compounds of Kovacs et al.

The comparasion should therefore be with Miyazaki et al. JP 63-307987, not Kovacs et al. EP 0519395. The rejection stands.

5. Claims 2 and 8-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yanagisawa et al. '171 as applied to claims cited above, and further in view of Sasakawa et al. '094 and Nett et al. '064.

Sasakawa et al. '094 teaches the use of mixtures of solvents including hexane, cyclohexane, ethylcyclohexane, methyl ethyl ketone, ethanol, propanol, ethylene glycol monomethyl ether, ethylene glycol monoethyl ether, benzyl alcohol, methylene chloride and tetrachloroethane (4/17-6/29). The use of binders, such as nitrocellulose, and ethyl cellulose resins to solutions for forming phthalocyanine based optical recording layers is disclosed as increasing the smoothness of the layer formed and reducing pin holing. (6/61-7/11)

Nett et al. '064 teach phthalocyanine compsitions which are useful in surface finishes or priting inks and are stabilized against crystallization. (1/6-10 and 2/42-54). Useful solvents including methanol, ethanol, propanol, diacetone alcohol, monoalkyl ethers of ethylene glycols, methyl ethyl ketone and mixtures thereof. (7/10-32) The use of binders including cellulose esters, cellulose ethers and other resins is disclosed. (7/32-48). Copper phthalocyanine dyes having four sulfoamido groups bound to the phenyl rings of the phthalocyanine moiety are examplified in table 4, including examples 5,11,12,14,17 and 19-23.

In addition to the basis provided above, the examiner cites Sasakawa et al. '094 who clearly points to the use of solvent mixtures for phthalocyanine dye solutions used to cast optical recording media layers and Nett et al. '064 which teaches copper phthalocyanine dyes having four sulfoamido groups bound to the phenyl rings of the phthalocyanine moiety are known to be

compatible with various binders, such as cellulosic polymers and that these are soluble in various solvents including those disclosed by Sasakawa et al. '094 which further renders the modification of the examples of Yanagisawa et al. '171 by the use of mixed solvents obvious.

In addition to the response above, the examiner notes that compatibility with other components in the recording layer, such as cellulosic binders and solvent taught by Sasakawa et al. '094, is an important consideration and one skilled in the art would look to compounds embraced by the teachings of Yanagisawa et al. '171 which are known to have this compatibility by looking at the data of Nett et al. '064. In this case, the Nett et al. '064 reference is almost used as a reference text to establish the properties of the compounds. The rejection stands.

6. Claims 2 and 8-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yanagisawa et al. '171, in view of Sasakawa et al. '094 and Nett et al. '064 as applied to claims cited above, and further in view of Lacroix et al. '650, Crounse '710 and Miyazaki et al. JP 01-133790.

Lacroix et al. '650 teaches phthalocyanine compounds embraced by the claims, but discloses them only for use as dyes, particularly for cellulosic materials such as paper.

Crounse '710 teaches phthalocyanine compounds embraced by the claims, but discloses them only for use as dyes, particularly for cellulosic materials.

Miyazaki et al. JP 01-133790 describes various substitutents for phthalocyanine compounds which include $-SO_3H$ and $-SO_2NR_4R_5$, (which embraces the exemplified - $SO_2NH(CH_2)_3N(C_2H_5)_2$ of compound (f) on page 6, which are useful in optical recording media. (see abstract)

It would have been obvious to one skilled in the art to modify the invention of Yanagisawa et al. '171 as combined with Sasakawa et al. '094 and Nett et al. '064 by using the phthalocyanine dyes taught by Lacroix et al. '650 and Crounse '710 with a reasonable expectation of success based upon their compatability with cellulosic binder materials and the teachings by Miyazaki et al. JP 01-133790 that $-SO_3H$ and $-SO_2NH(CH_2)_3N(C_2H_5)_2$ substituted phthalocyanines are useful in optical recording media.

The examiner responds to the applicants arguemtns that there is no motivation to combine by pointing the the compatability issues raised above. The rejection stands.

7 **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin J Angebranndt whose telephone number is 571-272-1378. The examiner can normally be reached on Monday-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Martin J Angebranndt
Primary Examiner
Art Unit 1756

05/31/2004